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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/608,637	06/30/2000	Jin Yang	42390.P9429	9275

8791 7590 10/05/2005

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EXAMINER

CRAIG, DWIN M

ART UNIT	PAPER NUMBER
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2123

DATE MAILED: 10/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/608,637

Applicant(s)

YANG, JIN

Examiner

Dwin M. Craig

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 July 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4, 5, 8, 14-18 and 24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4, 5, 8, 14-18 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

1. In view of the Appeal Brief filed on 7-18-2005, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are-set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

It is noted by the Examiner that under the recent rules changes, the Applicant will not be required to pay a fee to re-submit an Appeal Brief.

The Examiner respectfully points out to the following excerpt from the Federal Register/Vol. 69, No. 155/Thursday, August 12, 23004/Rules and Regulations;

Comment 44: Two comments state that the proposed rules are unclear as to subsequent appeal procedures after prosecution is reopened subsequent to the filing of a first Notice of Appeal and Appeal Brief. Specifically, the comments question if prosecution is reopened under either § 41.39(b)(1), § 41.50(a)(2)(i) or § 41.50(b)(1), and a subsequent appeal is taken, would applicant be required to again pay the Notice of Appeal and Appeal Brief fees. The comments believe that this extra cost is unfair and burdensome to applicants because the reopening of prosecution would be the result of action by the examiner or the Board, not action by applicants. Accordingly, the comments suggest that provision should be made in the proposed rules that applicants need not twice pay the Notice of Appeal and Appeal Brief Fees in an application where those fees have already been paid but prosecution was then reopened.

Answer: The comment will not be adopted. The rule making did not propose to change the current procedures in this area. Currently, once a Notice of Appeal and Appeal Brief fee has been paid in a proceeding, a second Notice of Appeal and Appeal Brief fee will not be required except if a final Board decision has been made on the first appeal. For example, in an application for patent, a Notice of Appeal and Appeal Brief fees have been paid and the examiner reopens prosecution in a new Office action, new fees are not required for an applicant to appeal from that new Office action. Another example is in an application for patent, a Notice of Appeal and Appeal Brief fees have been paid and the Board in its decision makes a new ground of rejection and the applicant elects to reopen prosecution before the examiner, then new fees are required for an applicant to appeal from any new Office action by the examiner. The same procedures apply under the rules as implemented in this rule making.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 4, 6, 8, 14, 15, 16, 17, 18 and 28 are newly rejected under 35 USC 101 because they are disembodied and merely algorithmic in their nature where these method claims could be implemented through mental steps and/or constructed on paper with pencil, and are not limited to being performed by a computer or a machine. See *In re Meyer and Weissman*, 215 USPQ193 (CCPA 1982), *In re Walter*, 205 USPQ 397 (CCPA 1980), *Arshal v United States* 208 USPQ 397 (US Cl Ct 1980), *In re Sarkar* 200, USPQ 132 (CCPA 1978), *In re Musgrave*, 431 F. 2nd at 893 167 USPQ 280 (CCPA 1970) and *In re Foster*, 438 F. 2d 1011, 1013, 169 USPQ 99, 101 (CCPA 1971). (see MPEP 2106).

It is further noted that the current claims do not expressly disclose a “concrete, useful and/or tangible result” as required by 35 USC § 101 and are therefore not statutory. *The Applicant is directed towards the MPEP chapter 2106*

“The claimed invention as a whole must accomplish a practical application. That is, it must produce a “useful, concrete and tangible result.” State Street, 149 F.3d at 1373, 47 USPQ2d at 1601-02. The purpose of this requirement is to limit patent protection to inventions that possess a certain level of “real world” value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research (Brenner v. Manson, 383 U.S. 519, 528-36, 148 USPQ 689, 693-96); In re Ziegler, 992,

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F.2d 1197, 1200-03, 26 USPQ2d 1600,1603-06 (Fed. Cir. 1993)). Accordingly, a complete disclosure should contain some indication of the practical application for the claimed invention, i.e., why the applicant believes the claimed invention is useful."

The Examiner hereby provides an example of how the Applicant's could amend the current claim language in order to direct the claims towards statutory subject matter, using independent claim 8 as an example,

8. A computer software product including one or more recordable media having executable instructions stored thereon which, when executed by a processing device, causes the processing device to verify the operational logic of an integrated circuit by performing the following steps:

initialize a symbolic simulation relation for an assertion graph on a first symbolic lattice domain; and

compute the symbolic simulation relation for the assertion graph on the first symbolic lattice domain to verify the assertion graph according to a normal satisfiability criteria.

...or independent claim 14,

14. A computer implemented method comprising:

initializing a symbolic simulation relation for an assertion graph on a first symbolic lattice domain, wherein the assertion graph on the first symbolic lattice domain is configured to express a justification property to verify through computing the symbolic simulation relation; and the operational logic of an integrated circuit is verified before the integrated circuit is manufactured.

2.1 Amendment is required.

Allowable Subject Matter

3. The following is a statement of reasons for the indication of allowable subject matter:

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3.1 As regards the Allowability of Applicant's claims, the Examiner notes that once the Applicant's claim language is amended so that the claims are directed towards statutory subject matter then the claims will be in condition for allowance.

3.2 As regards independent claims 4, 14, 16 and 28, the following limitations, in combination with other limitations are neither anticipated nor made obvious by the prior art, "*wherein the assertion graph on the first symbolic lattice domain is configurable to express a justification property*" The Examiner notes that the Applicant's have persuasively argued that the cite prior art reference, specifically "*Jain*" does not teach or suggest the expressly claimed, "*justification property*" see page(s) 7 & 8 of the Appeal Brief dated, 7/18/2005.

3.3 As regards independent claim 8 the prior art does not teach or make obvious the following limitation in combination with other limitations, "*compute the symbolic simulation relation for the assertion graph on the first symbolic lattice domain to verify the assertion graph according to a normal satisfiability criteria*". The Examiner notes that the Applicant's have persuasively argued that the "*normal*" satisfiability criteria as expressly claimed is different from the satisfiability criteria as disclosed in the "*Jain*" reference, see page(s) 20 of the Appeal Brief dated 7/18/05.

3.4 As regards dependent claims 5, 15, 17 and 18 they are allowed as they depend upon an allowed base claim.

Conclusion

4. Claims 4, 6, 8, 14, 15, 16, 17, 18 and 28 are rejected.

4.1 Claims 1-3, 6-7, 9-13, 19-27 and 29-30 are cancelled.

4.2 Prosecution is reopened and this Office Action is Non-Final.

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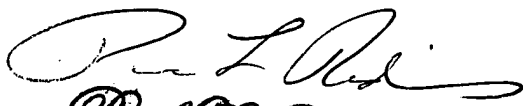
4.3 The Amendments submitted on 4/18/2005 and 7/18/2005 have been entered.

4.4 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwin M. Craig whose telephone number is (571) 272-3710. The examiner can normally be reached on 10:00 - 6:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DMC


Paul L. Rodriguez 10/7/05
Primary Examiner
Art Unit 2125